

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| | | | | |
|-----------------------|---------------------|---|-------------------|---------------|
| In re Application of: | Dianne ELLIS et al. |) | Examiner: | Singh, Arti R |
| | |) | | |
| Application No.: | 10/762,945 |) | Group Art Unit: | 1794 |
| | |) | | |
| Filed: | January 22, 2004 |) | Confirmation No.: | 5980 |
| | |) | | |
| Docket No.: | 02-299 |) | | |

For: ANTI-MICROBIAL NONWOVEN WIPE

DECLARATION UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, the undersigned declarant, Dianne Ellis, do hereby declare and state:

1. I am a named co-inventor of the invention described and claimed in the above-identified patent application.
2. I am familiar with the subject matter, contents, and relevant portions of the prosecution history of the above-identified application including the Advisory Action dated November 27, 2007, the Final Office Action dated October 15, 2007, the Office Action dated April 5, 2007, the Examiner's Interview Summary dated August 6, 2007, and U.S. Patent No. 6,734,157 B2 to Radwanski et al. that is referenced in these office communications.
3. I received a Bachelor of Science degree in chemistry from West Virginia University, and I have been employed in the nonwovens industry since 1987.
4. I am currently employed by Polymer Group, Inc. (PGI), as a Senior Scientist in the wipes division. I have responsibility for developing wiping products.
5. I have about 20 years experience in research and development of nonwoven products.

6. I am named as an inventor or co-inventor in numerous patent applications filed worldwide on technologies related to nonwoven products and/or methods for making them, which include the following:

| | |
|--------------|--------------|
| 2007/0032151 | 2006/0068673 |
| 2007/0060003 | 2005/0215144 |
| 2006/0128248 | 2004/0228904 |

7. In view of at least the facts set forth above and referenced in paragraphs 1.-6. above, inclusive of my indicated combined educational and practical experience, I believe that I should be considered an expert in the field of nonwoven technology in general, and nonwoven product constructions in particular.

8. In refusing to allow the claims of my patent application, I understand that the U.S. Patent & Trademark Office (PTO) has taken the following position:

... the Examiner is not convinced of how the current invention is structurally different than that shown in USPN 6734157 to Radwanski et al. Applicant attempts to argue that the anionic agent is not present in Radwanski et al. This assumption is incorrect. Applicant is directed to columns 7-8 where these teachings can be found.

Advisory Action dated November 27, 2007, para. 13.

9. I also understand that the Patent Examiner of record described the disclosures of Radwanski et al. in the Office Action of April 5, 2007, as follows:

Radwanski et al disclose making wipers that provide a controlled release antimicrobial agent. ... The antimicrobial agents that are employed can be combined with various polymers, binders or a combination thereof (column 3). ... In column 3, the instant patent teaches that the antimicrobial agent can be a plethora of agents and includes that of quaternary type (see also columns 7-8). ...

10. My presently claimed invention is related to a nonwoven antimicrobial wipe comprising a fibrous nonwoven substrate treated with anionic binder and anionic anti-microbial agent. As presently claimed, the anti-microbial is selected from dual quaternary ammonia anti-microbial agent, potassium iodide, and sodium hypochloride. As explained in my present application, the wipe combining anionic binder and anionic anti-microbial agent has the performance feature of readily releasing the anti-microbial agent into a water source to provide a more potent and effective disinfectant solution associated with the wipe.

11. Based on my review of the Radwanski et al. patent ("Radwanski"), this reference teaches wipes having controlled release of anti-microbial agent over the course of multiple rinsing cycles because of the substrate layer (for example, see column 4, lines 48-65). This "controlled release" goal of Radwanski with regard to the anti-microbial agent is opposite to and fundamentally different from my present invention. In my invention, rapid release anti-microbial agent-delivering wipe structures are provided. Moreover, the mechanisms described by Radwanski for providing controlled release of the anti-microbial agent nowhere overlap, correspond to, or even suggest selection of ingredients based on charge of the anti-microbial agent or binder (see, column 6, lines 34-48; column 8, lines 20-57).

12. Based on my review of the reference, Radwanski never teaches an anionic binder. Further, Radwanski never teaches using anionic binder in combination with an anionic anti-microbial agent. Further yet, Radwanski does not teach or suggest that the charge of the binder is a technically relevant feature in any respect for purposes of the controlled release anti-microbial wiper described by Radwanski.

13. In particular, I observe that Radwanski at column 3 (see line 56) merely mentions

“soluble binders”, but does not indicate if the “soluble binders” are anionic, neutral, or cationic in charge. Also, Radwanski at column 8, lines 60-63, refers to an “aqueous emulsion of acrylic polymer” used to coat a calcium hypochlorite anti-microbial agent, and also generally refers to an “acrylic coating” at column 12, line 43 and “acrylic acid polymers” at column 13, line 31. From a technical standpoint, it is generally known that the charge of acrylic polymers and emulsions is a variable. Different sources of acrylic polymer can vary in charge. That is, the charge of any particular acrylic polymer or emulsion may be neutral (non-ionic), cationic and/or anionic, depending on the chemical composition, structure and functionalization, and possibly other factors. Moreover, Radwanski does not reference a commercial source of acrylic polymers generally mentioned in the specification and examples of that patent, so it is not even possible to try to learn what charge may have incidentally applied to any acrylic polymers mentioned by that reference.

14. Regarding anti-microbial agents, based on my review the reference in the Office Action of April 5, 2007 to quaternary amines in columns 3, 7 and 8 of the Radwanski reference is technically inadequate to teach an anionic anti-microbial agent to one of ordinary skill in the art. From a technical standpoint, it is generally known that the charge of quaternary amines is a variable. Different sources of quaternary amines can vary in charge. That is, the charge of any particular quaternary amine may be neutral (non-ionic), cationic and/or anionic, depending on the chemical composition, structure and functionalization, and possibly other factors. Moreover, Radwanski does not reference a commercial source of quaternary amines generally mentioned in the specification of that patent (see column 3, lines 38-39 and column 8, lines 1-2), so it is not even possible to try to learn what charge may have incidentally applied to any quaternary amines mentioned by this reference.

15. I also observe that Radwanski refers to calcium hypochlorite and sodium hypochlorite anti-microbial agents at column 7, lines 57-59, and the reference exemplifies ALDRICH-brand calcium hypochlorite particles ("Aldrich #24-415-5 stabilized granular technical grade") in Examples 1-3 of that reference. Technical information on this particular calcium hypochlorite product does not appear to be currently publicly available at the website of Sigma-Aldrich (www.sigmaaldrich.com). In general, calcium and sodium hypochlorite agents typically dissociate in water into the calcium cations (Ca^{++}) or sodium cations (Na^{+}), as applicable, and the hypochlorite anion ClO^{-} , while a small portion would be expected to hydrolyze into a corresponding metal hydroxide and hypochlorous acid. This dissociated agent imparts cationic charge into water via the metal ions released into the water. Moreover, Radwanski never specifically describes combining these types of calcium or sodium hypochlorite anti-microbial agents with an anionic binder (see Examples 1-3). Radwanski also mentions other anti-microbial agents at column 3, lines 32-37 and column 8, lines 1-6, such as halogens, chlorine dioxide, oxidants, peroxides, silver ions, and silver complexes. Some of these agents are expressly disclosed as having positive charge, such as in the instance of the silver ions. Moreover, none of these are described by Radwanski for use in specific combination with an anionic binder in a wipe.

16. In my opinion, a person having ordinary skill in the nonwoven art could not and would not have read Radwanski as teaching, suggesting or predicting the unexpected results obtained by the combination of an anionic binder and an anionic anti-microbial agent in a nonwoven fibrous substrate of a nonwoven wipe according to my invention.

17. In view of my foregoing technical explanations and opinions, it is my opinion that a person having ordinary skill in the nonwoven arts would not have considered my invention to be

identically disclosed or obvious over the teachings of Radwanski.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the instant application or any patent issuing therefrom.

Further Declarant sayeth not.

12/14/07
Date

Dianne Ellis
Dianne Ellis